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eXcepta PCB

Replication server

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Index

INTRODUCTION

The Personal Cloud Backup replication server is build especially for Home users and small businesses. Using the PCB replication Server enables PCB users to replicate their personal and/or business data to an internal servers or even a simple workstation. At the heart of the PCB Replication Server is massive savings on time and space due to the fact users can download the entire repository from within the PCB client. No interference from helpdesk personnel is needed and the solution is focusses on Self-Heal principals. The current PCB replication Server is built on FileZilla technology which has proven to be stable and trustworthy. Support for FTP and FTP(S) is provided out-of-the-box and even enables users to upload data directly from mobile devices, like smartphones and tablets, using FTP or FTP(S) clients.

Future releases will also support WebDav and WebDav(S) and will be designed in our own engines from the ground up. This will ensure no coding is used from third party vendors or our OEM partners.

Data backup has been avoided by many people due to the lack of an affordable and easy to use backup and recovery product. nCoActive Personal Cloud Backup (PCB), and the replication server component, addresses these issues with fast, flexible, and efficient automatic data backup and recovery.

Using state-of-the-art technologies the PCB ensures data will never be lost and can be restored anytime and anywhere. File filters, and folder selections, combined with corporate policy settings will ensure only allowed data is being backed-up and synchronized.

Setting up local backups and synchronization to any desired location can be configured on the PCB replication server/workstation easily and remote restores can be initiated whenever needed.

Please read this manual before starting to use the PCB replication server.

This manual applies to the following Operation Systems;

- ✓ Windows 7
- ✓ Windows 8 & 8.1
- ✓ Windows 2012 & Windows 2012R2 server
- ✓ Windows 2008 & Windows 2008R2 server

SYSTEM REQUIREMENTS

PCB Replication Server has the following minimum system requirements:

- ✓ Operating system: Windows 7, Windows 8/8.1, Windows 2008/2008R2, windows 2012/2012R2
- ✓ Processor: Pentium 4 and higher
- ✓ Memory: 1024MB RAM
- ✓ Disk space: 100MB (for application installation files)
- ✓ Pre-requirements and other requirements
    - o Internet connection for synchronization purposes
    - o Enough disk space to store local backup data, this space should be at least 75% of the total amount of data selected to be backed-up
    - o .Net 4 which will be installed during the PCB Replication Server installation process if not already installed

Some of the powerful capabilities that the PCB Replication Server offers are:

- **Protocol support.**
  PCB replication server supports FTP and FTP(s). Both protocols will be available after installation.
- **Users and groups.**
  Unlike most backup tools Personal Cloud Backup only backs up new or altered files – similarly it is only changed files that are restored. There's a simple explorer style interface to help you locate the files you have accidentally deleted. Each backup creates a PCB restore point so you can easily roll back to any earlier version of a file or folder.
- **Fast & sufficient replication.**
  You can backup to local and remote locations sequentially. When you are away from the network you backup locally and then you synchronize with the network backup location when you reconnect. That's great for mobile users as backups are secure even if a computer is damaged, lost, stolen or formatted!
- **Replicate/send data using any device.**
  By compressing, securely encrypting and de-duplicating unique files only the files that have changed is backed up (incremental, file-level single instance storage).
- **Secure and easy to configure.**
  Personal Cloud Backup runs in the background and does not cause a noticeable system slowdown when backing up even when frequent backups are scheduled.
- **Easy to use and configure.**
  Personal Cloud Backup can backup System files and Program files to help you fix problems with your computer.
- **Bandwidth control.**
  Personal Cloud Backup has the option to replicate the data to a secure datacenter, even if the mobile device is lost, stolen or broken, the data is safe and can be restored.
- **Archiving.**
  Optionally nCoActive provides long time archiving to DVD or Blu-Ray to safeguard, and ship back to the customer, all stored data using encryption and high compression rates.
- **Monitoring & Alerting.**
  Optionally nCoActive provides monitoring & alerting for your machine and the PCB replication server, this feature will ensure nCoActive support personnel knows what's happening and can pro-actively respond to any issues in the Operating System, Applications and of course the local backup process and synchronization.

INSTALLATION PROCEDURE

After registering on our customer portal you can download the software, visit our knowledge base, view and save needed manuals and much more. Please be aware that you need to start the installation procedure with administrative rights on the local machine.

If you have not downloaded the software already please do so now by pressing the download button to the right. This link will guide you to our customer portal in which the software can be downloaded, also a lot of other information will be available.
Start the installation procedure after the download has finished by opening the downloaded installer.

PCB Replication Server requires .NET Framework 4.0 to operate. If .NET Framework 4.0 is not installed the requirement screen will be shown. Press Install to start the installation process.

Windows XP users might see another screen for the requirements as shown below. This is because .NET is depending on other components as Windows 7.
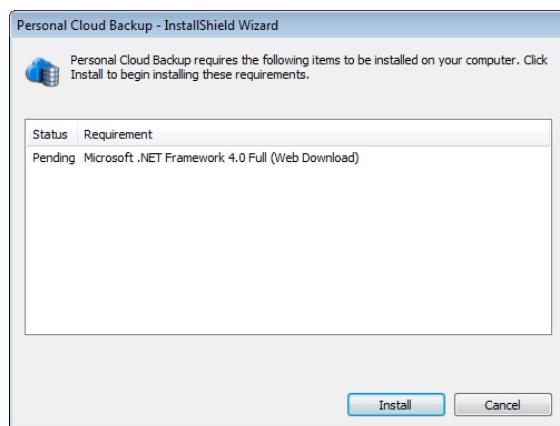
For Windows XP, a reboot is required after the installation procedure finishes.

If .NET Framework 4 was already installed on your machine the installation procedure will start slightly different. The previous screen will not be shown and the install process will immediately start installing the PCB Replication Server.
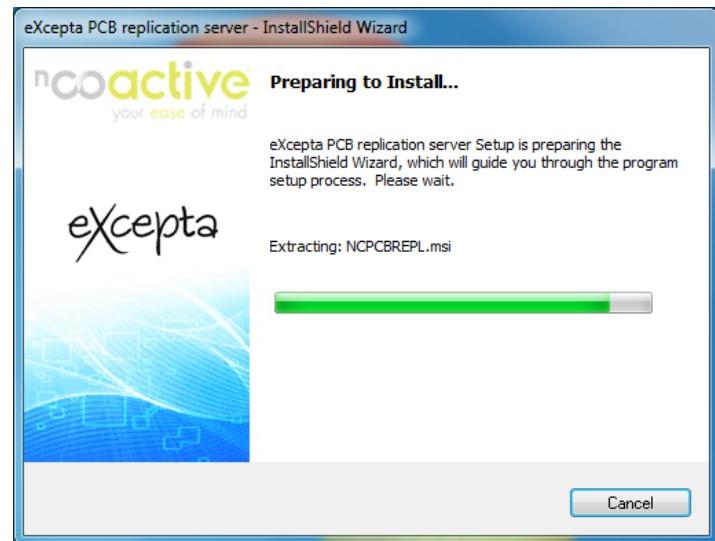

Press next to start the installation procedure

Please read the EULA (End User License Agreement) and select I accept the terms in the license agreement. Optionally the EULA can be printed and kept in a safe place.

Press Next to continue the installation process.
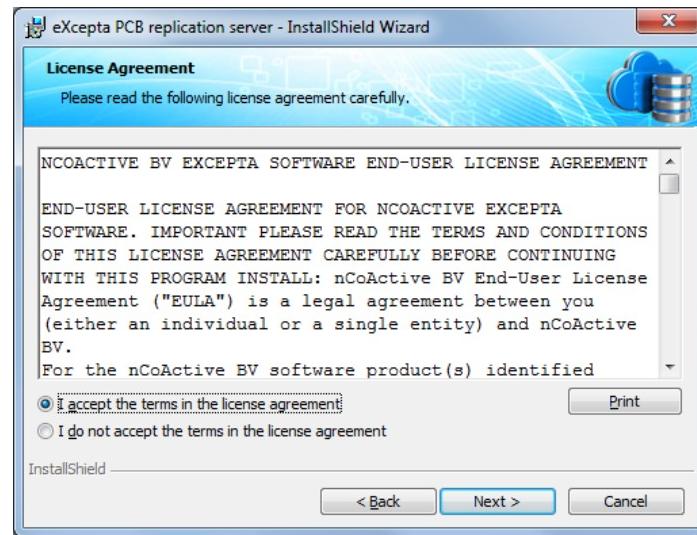
Running the installer without the appropriate rights can cause the installation process to fail. Run the installer as an administrator or with administrative rights if this happens.

The user name and organization will be filled in automatically by the installer. If, for any reason, this information is incorrect please fill in the required customer information fields accordingly.

Press Next to continue the installation process
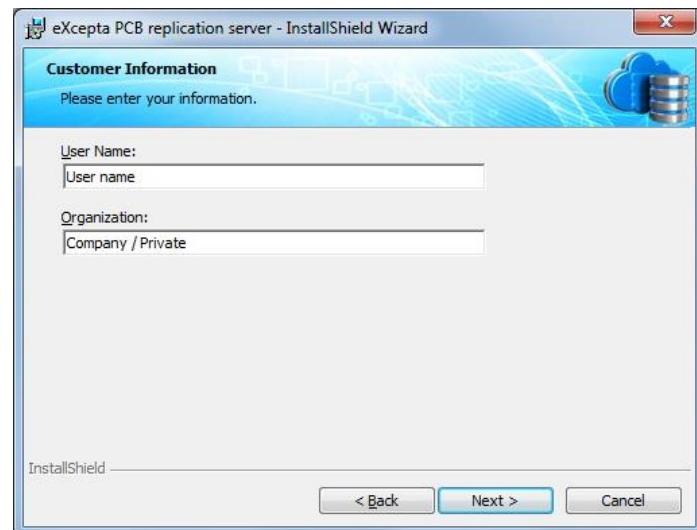
Press Install or Back to review, or change, any of your application settings.
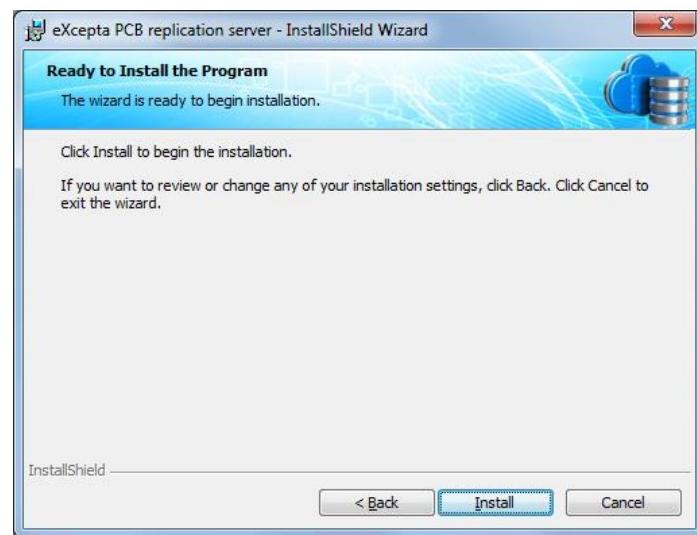
The installer will install a service and start it immediately. If, for any reason, the service cannot be installed the installer will stop and alert the user. The cause of this behavior can be due to not enough rights on the local machine. Please ensure the installer is run as administrator and you have sufficient rights to install Windows services.

Please read the end-installation dialog. Press Finish to end the installation process

PCB Replication Server is now installed and can be started via the desktop shortcut or the start menu.

PCB REPLICATION SERVER CONFIGURATION

The following chapters will explain all configuration settings. For any missing information or questions about the settings we refer to our forum on http://www.forum.ncoactive.com.

GENERAL SETTINGS

In the General settings screen you can set the FTP port and the maximum users which can connect to the PCB Replication Server at the same time.
If, for any reason, the FTP port is changed to another port please be aware firewall changes are necessary. For more information about these changes please look in chapter "Firewall settings"
The number of threats determine the amount of threats that simultaneously can be used. This value depends on the number of processors in the machine. Only change the default setting if performance is degrading.
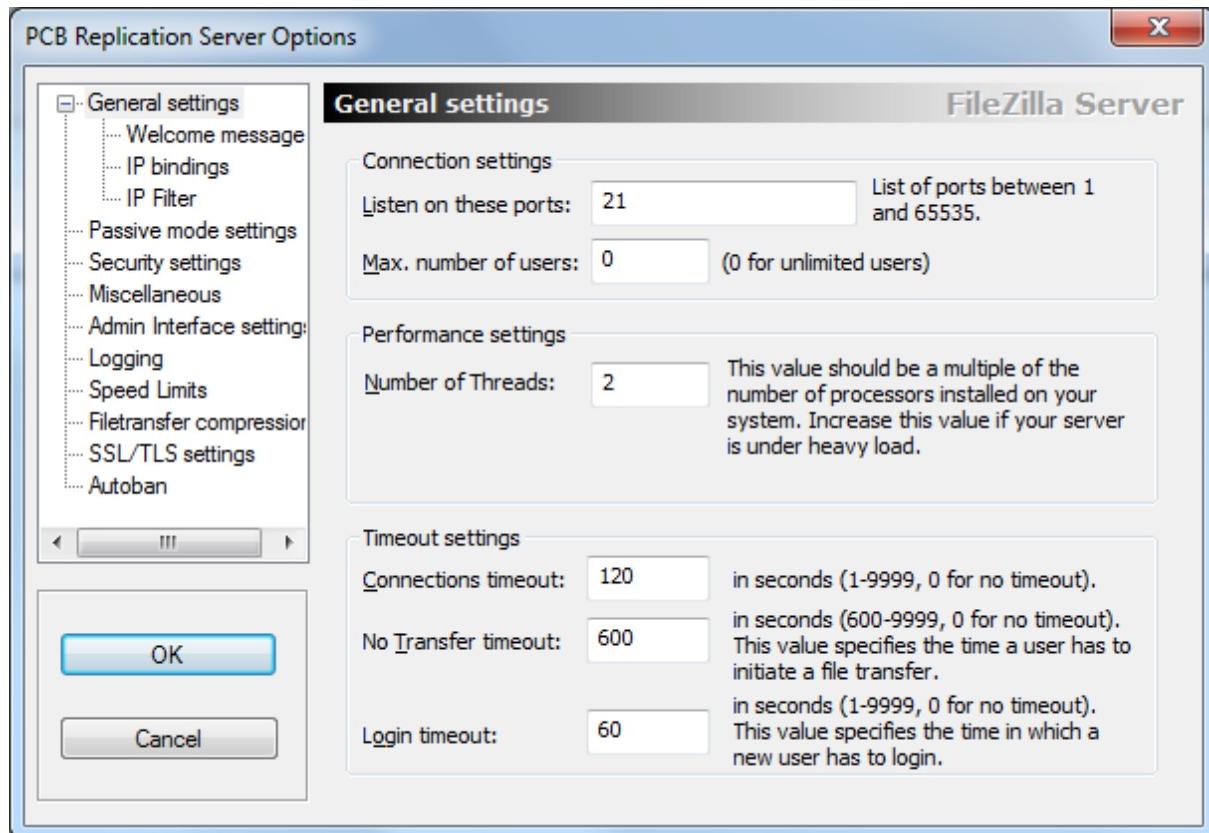
PASSIVE MODE SETTINGS

In passive mode FTP the client initiates both connections to the server, solving the problem of firewalls filtering the incoming data port connection to the client from the server. When opening an FTP connection, the client opens two random unprivileged ports locally (N > 1023 and N+1). The first port contacts the server on port 21, but instead of then issuing a PORT command and allowing the server to connect back to its data port, the client will issue the PASV command. The result of this is that the server then opens a random unprivileged port (P > 1023) and sends P back to the client in response to the PASV command. The client then initiates the connection from port N+1 to port P on the server to transfer data. By defining the PASV custom port range only the specified ports will be used in PASV mode reducing the risk of opening ports on a firewall which in turn can introduce security issues.
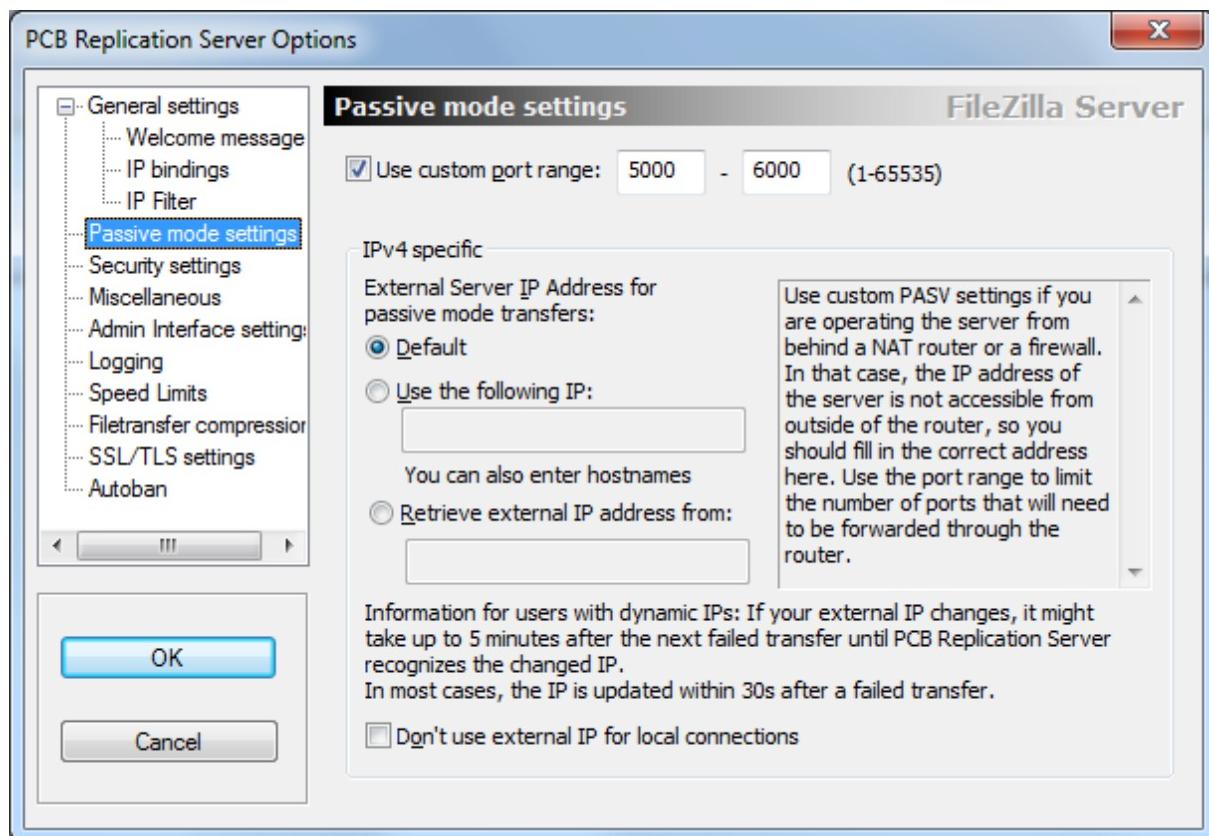
SECURITY SETTINGS

The security settings enable you to block server-to-server transfers. Only disable these options if explicitly required!
The PCB replication server will check the incoming IP and matches it to the original source, if the IP is different the session will be dropped instantly.
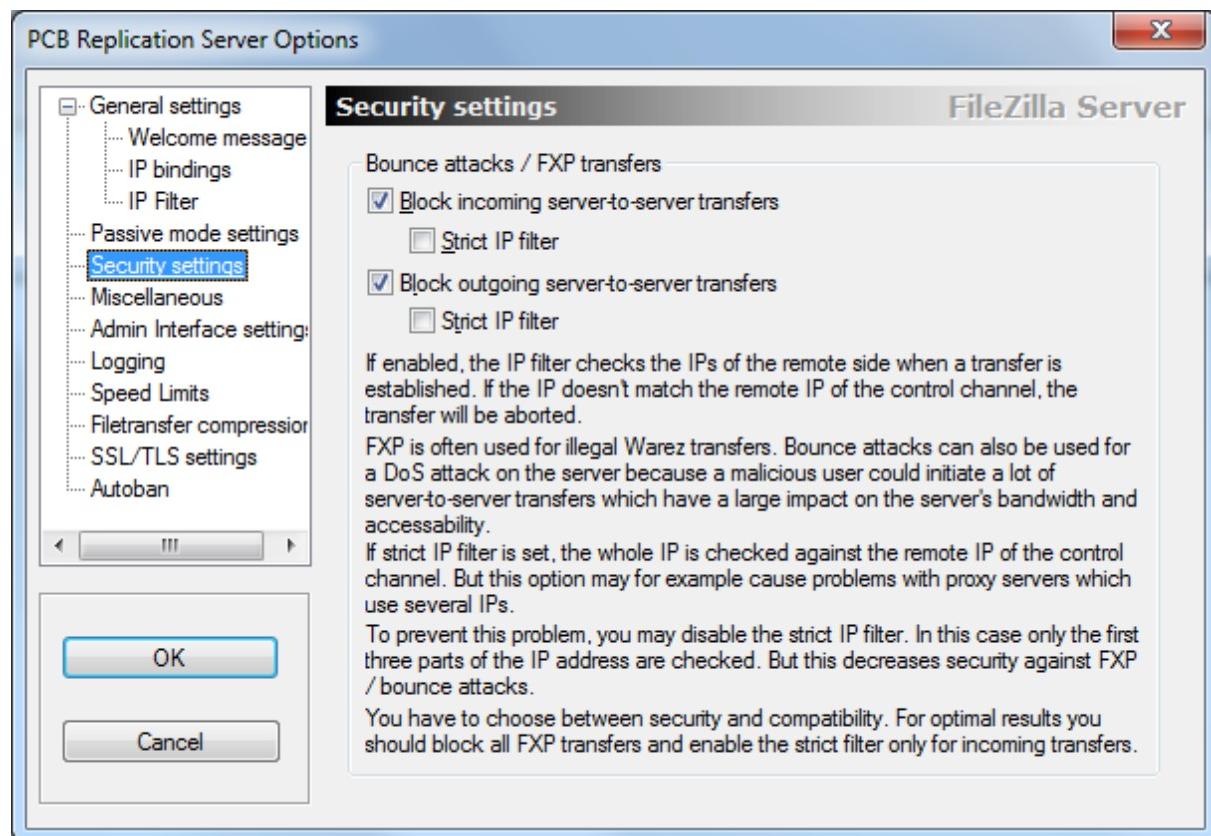
LOGGING

To keep track of what happens on the Replication server logging is enabled by default. Per day a log file will be created and will rotate every 7 days.
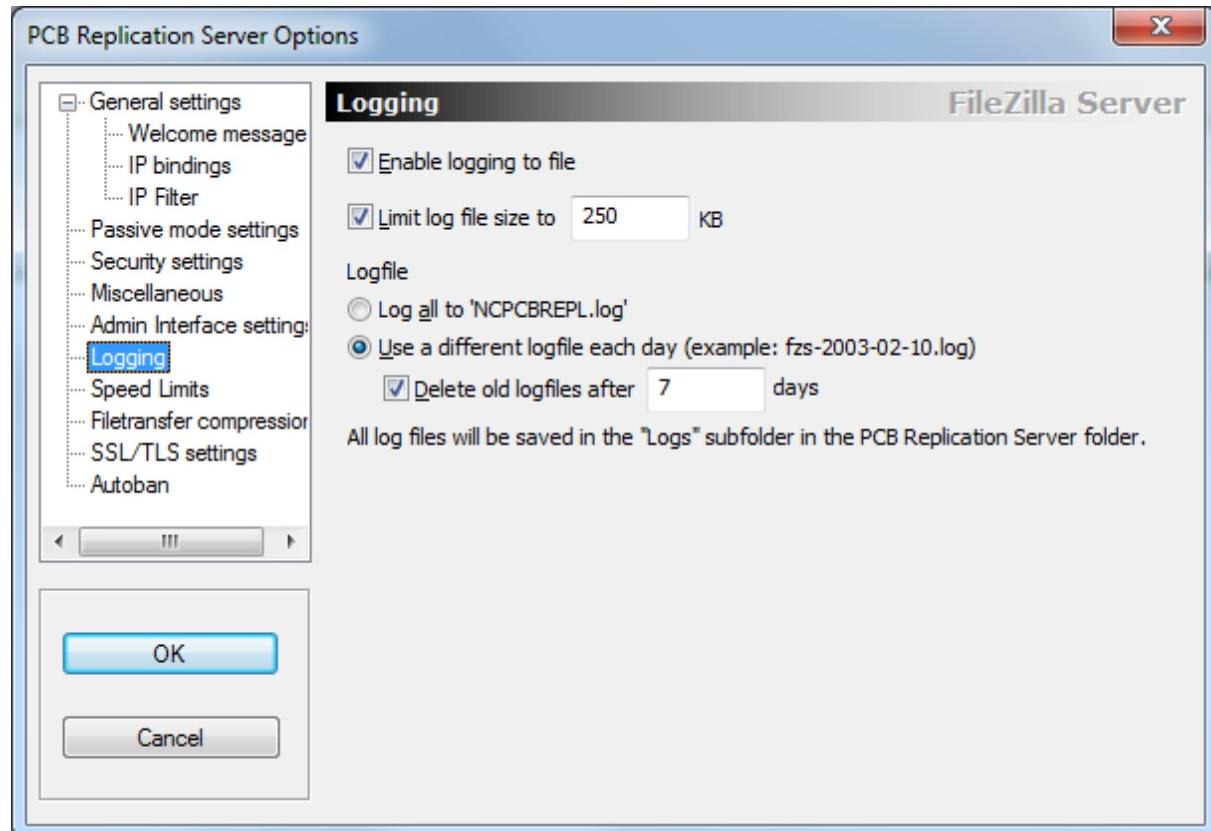
SPEED LIMITS

Bandwidth control determines the bandwidth usage per server or even per user.
Per default all users will inherit the server download and upload speed limits. IF needed the settings can be set per user which will overwrite the server settings.
Rules can be setup to control speed limits for specific dates, within specific time frames, and the speed during the set periods.
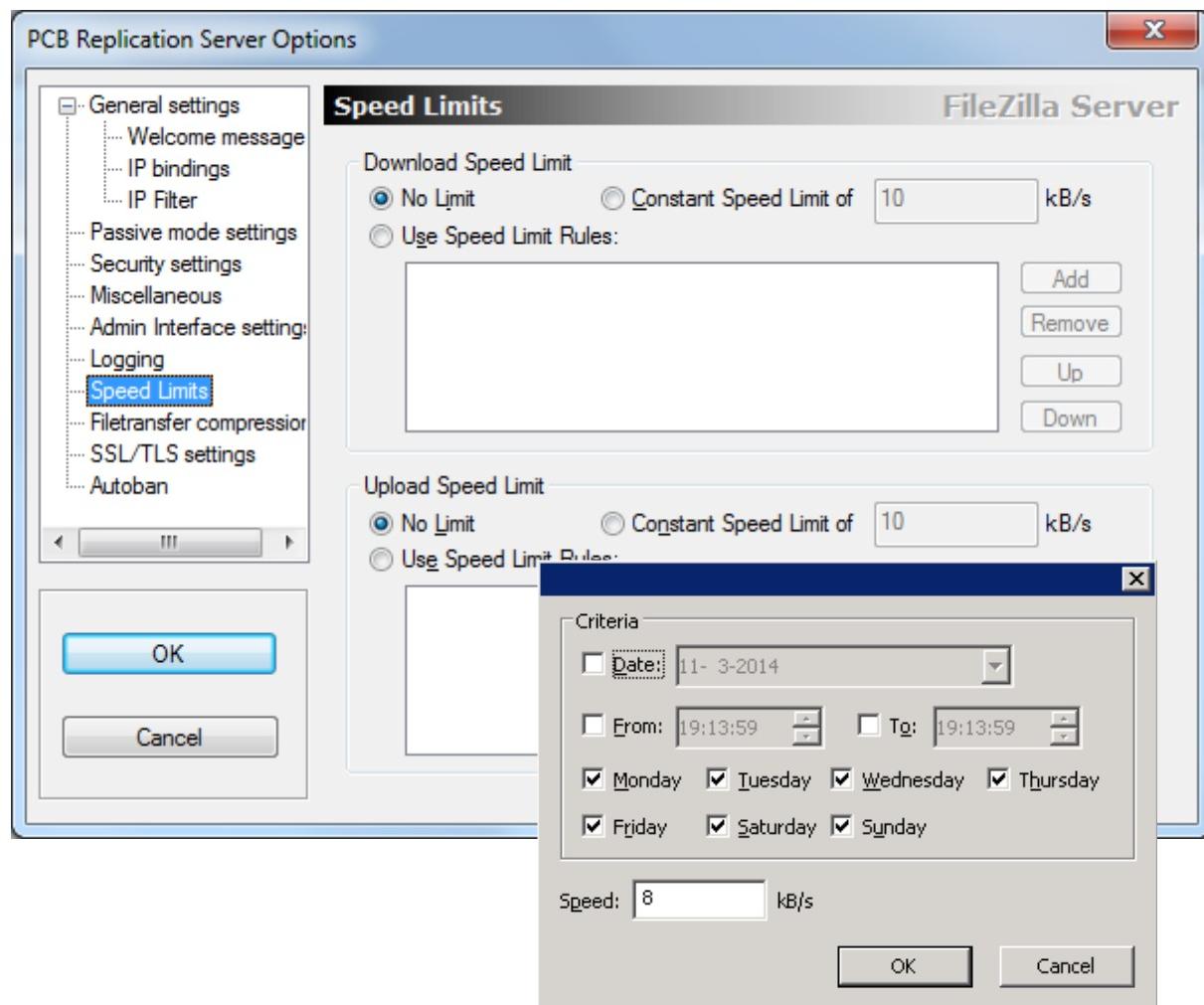
SSL/TLS SETTINGS

SSL is enabled by default to provide secure transfers of data. As shown earlier in this document PASV is used and ports are predefined. FTP(S) communicated via port 990 and uses the reserved ports between 5000 and 6000.
A certificate is installed which should only be changed if necessary.
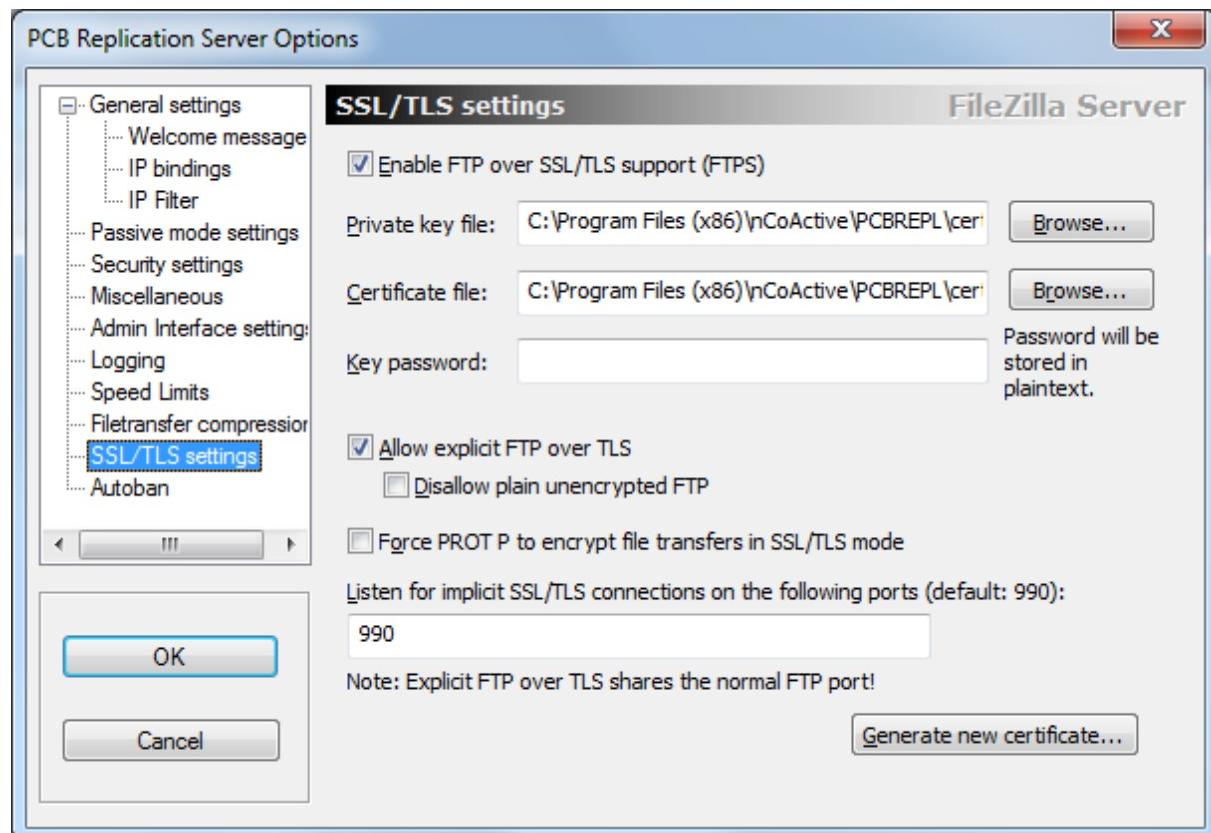
AUTOBAN SETTINGS

Autoban enables the adminstrator to control the amount od fialed attempts within 1 hour. This makes attempts to break into the server less attractive and will ensure the system will be safe from unauthorized connections.
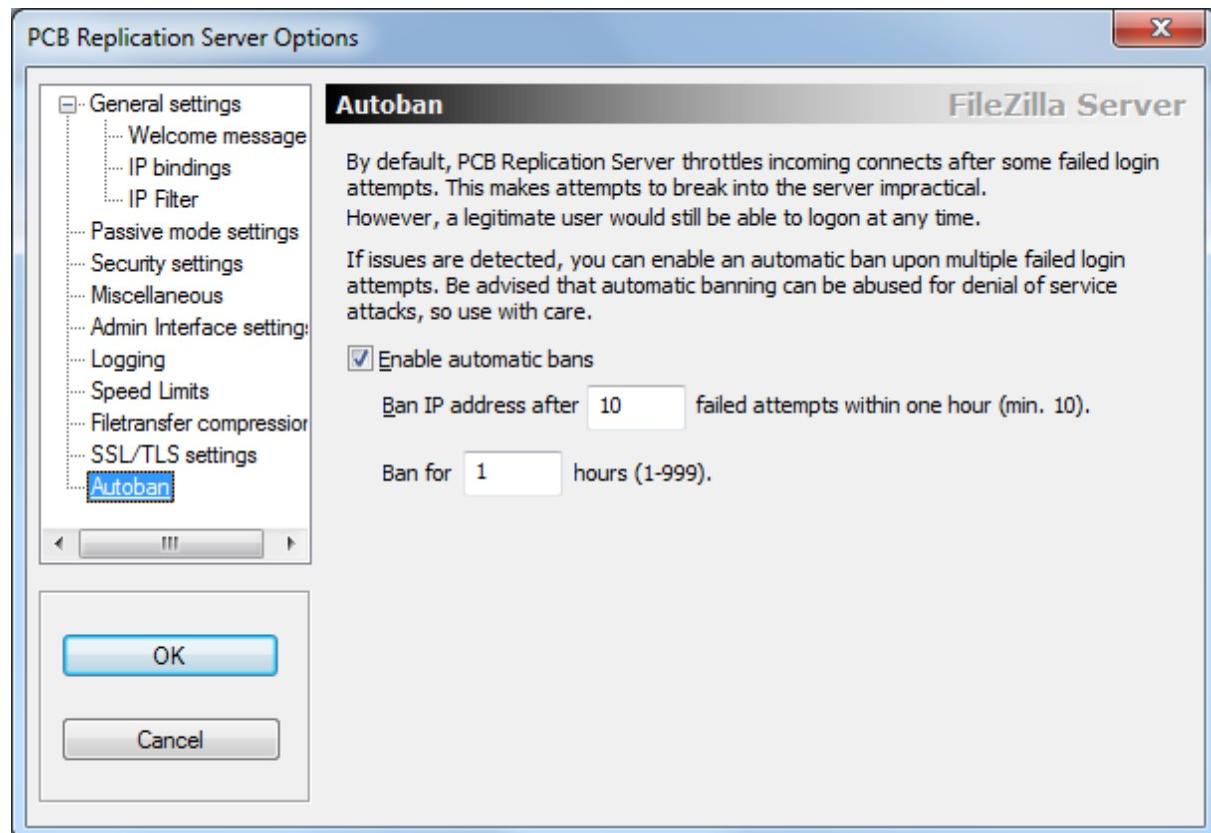
USERS AND GROUPS

Users have to be created to provide replication services. Per user the home folder has to be created as shown in the following screens. Authorization will ensure no unauthorized users can access the system. As shown server settings can be overwritten on a per user bases. Forcing SSL will disallow a user to connect to the replication server using FTP. This will increase the level of security but could cause issues on specific devices/applications which require FTP access.
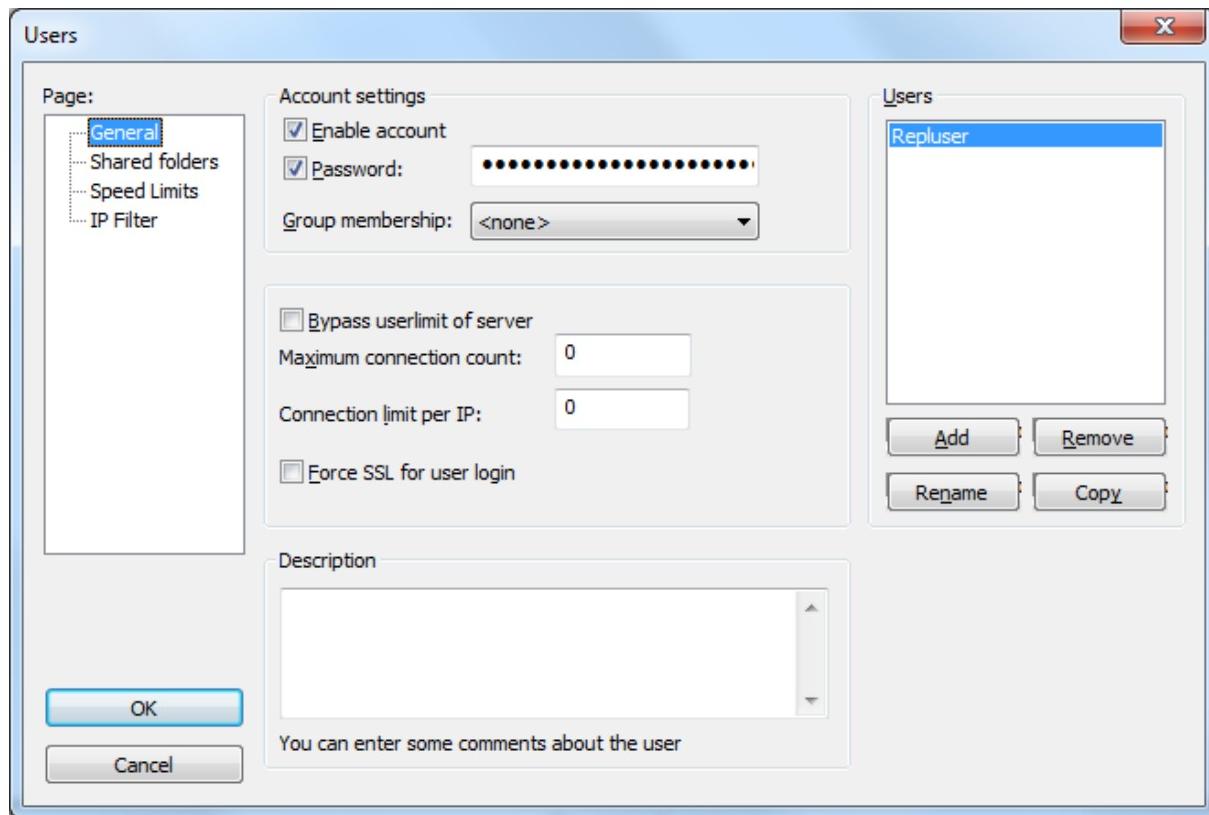
For test purposes a user has been created, this user has the following credentials

Username	: Repluser
Wachwoord	: PCBreplication
Default Folder	: D:\PCBreplication\Repluser

Use the user credentials in the cloud synchronization settings within PCB. Press upload to synchronize the local repository to the PCB replication server. Select download to restore the repository back from the Replication server back to the local machine.

USER BACKUP TARGET FOLDERS

Backup folders are configured on a per user bases. Each user is only allowed to connect to their home folder and cannot browse up in the folder tree. To be sure all data can be replicated select the options as shown below. We strongly advise to store replication folders on a designated volume to overcome loss of the operating system and to make it easier to back up the data using block level backup software. More information about data protection can be found on our website.
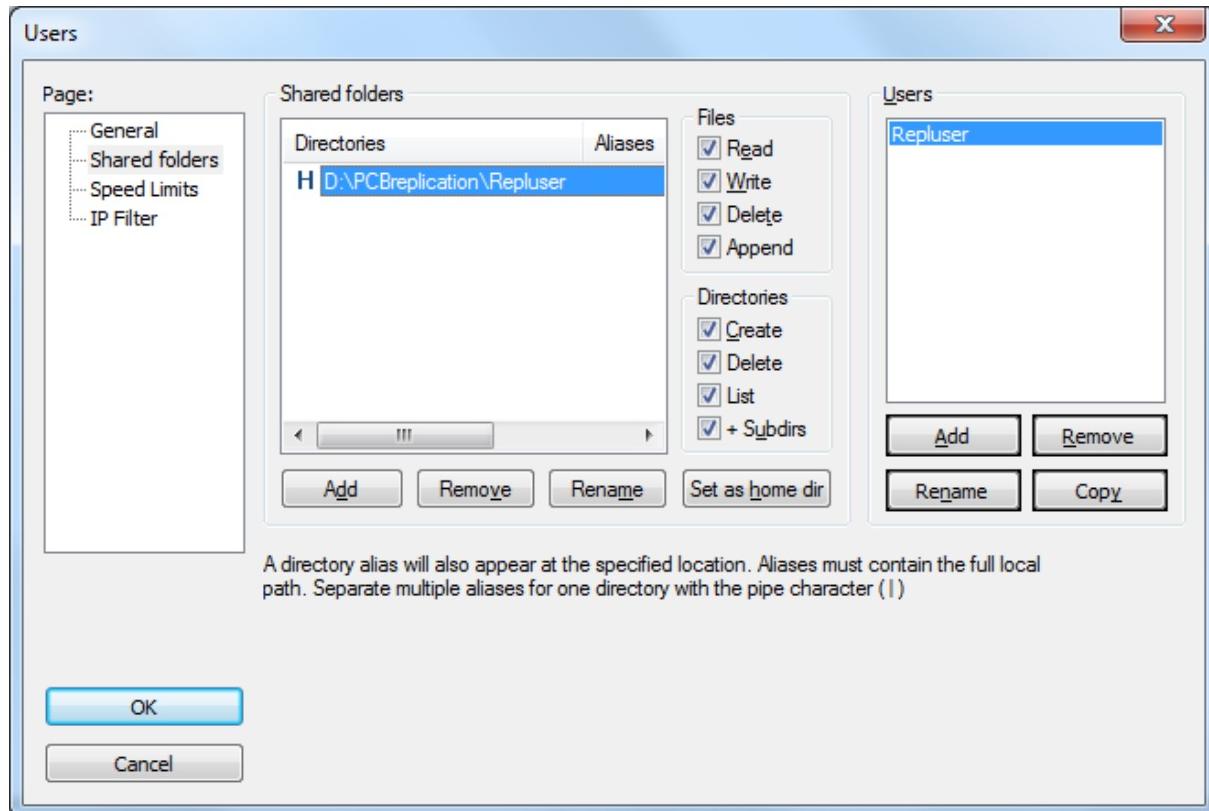
BANDWIDTH CONTROL

As described before, speed limits can be set per user.

IP FILTERING

IP filters are used to control access to the server in IP level instead of protocol level,
Allowing specific IP addresses will increase the security level but could introduce a challenge for roaming users which use DHCP on different networks. We recommend only to use this option to reject specific IP addresses in case of intrusion alerts or unauthorized tempering with user accounts.
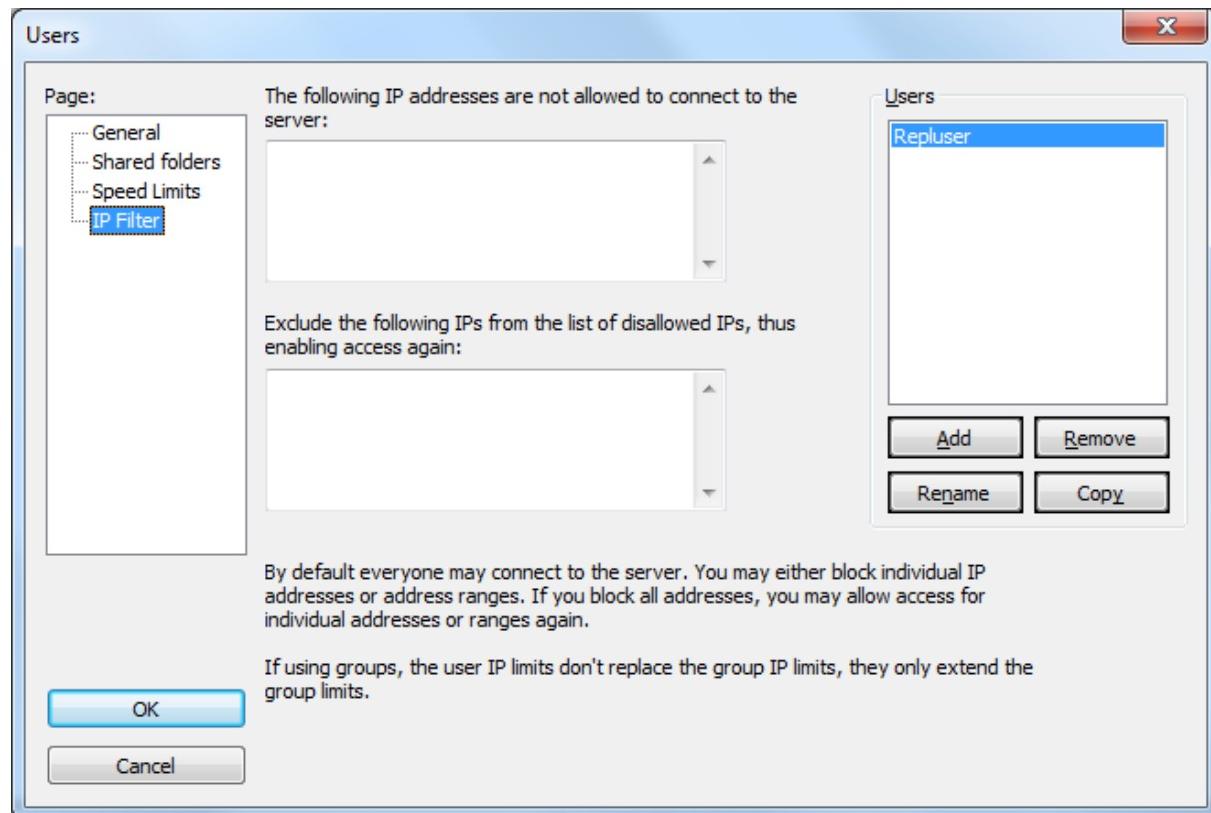
CHANGE CONNECTION STATE

The server connection state if "online" the moment the installation has finished. Changing the connection state, for maintenance or other reasons, can be accomplished by selecting the options as shown below

Select the first icon in the task menu to disable access to the replication service, this option will take the server offline.

The second icon, lock symbol, will keep the server online but lock the server for further users connecting for replication or other purposes. Locking can be used to investigate strange behavior on the system shown in the main event window.

Furthermore locking and taking the server offline can be done via the notifications area from Windows. Exiting the application will not stop the server from running.

FIREWALL SETTINGS

By default firewalls block all traffic expect if it's allowed by the local Windows firewall rules. PCB replication server uses specific ports that should be excluded from the firewall rules, these ports are;

FTP   : TCP port 21
FTP(S)   : TCP port 990
PASV ports   : TCP ports 5000 – 6000

For more information please select the help (F1) function within the Windows operating system.

To enable inbound replication the ports should also be opened in the access (perimeter) firewall, please refer to your vendor documentation how to open ports and NAT them to the internal IP address of the replication server/workstation.

eXample:
Replication server
Replication server IP address   : 192.168.1.1
Opened ports on the Windows Firewall   : 21,990, range 5000-6000

Perimeter firewall configuration
ISP WAN ip address   : 84.22.124.212
NAT routing table   : From WAN IP to 192.168.1.1 open TCP port (FTP) 21
                                         : From WAN IP to 192.168.1.1 open TCP port FTP(S) 990
                                         : From WAN IP to 192.168.1.1 open TCP port range 5000-6000

Dynamic DNS can be used to map the external IP address to a host header. A host header is a reference to a domain name (FQDN) which can be used for several purposes.
In the example above the external IP address can be connected to dynamic DNS options within the perimeter firewall or by asking the ISP provider to create a host header for replication purposes.

Example:
Host header for replication
Host header   : Repl.<youdomain>.com bound to 84.11.124.212
        OR   : Repl.<dyndnsprovider>.org bound to 84.11.124.212

INFORMATION & SUPPORT

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